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| 10/714,392 | 11/17/2003 | Johannes Straver | 4590-232 | 2059 |
| 33308 | 7590 | 07/03/2006 | EXAMINER | |
| LOWE HAUPTMAN GILMAN & BERNER, LLP 1700 DIAGNOSTIC ROAD, SUITE 300 ALEXANDRIA, VA 22314 | | | PARSONS, THOMAS H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1745 | |

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,392

Applicant(s)

STRAVER, JOHANNES

Examiner

Thomas H. Parsons

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Response to Amendment

This is in response to the Amendment filed 8 June 2006.

(Previous) DETAILED ACTION

1. The objection to the abstract of the disclosure has been **withdrawn** in view of Applicant's Amendment.
2. The objection to the disclosure because of minor informalities has been **withdrawn** in view of Applicant's Amendment.

Claim Rejections - 35 USC § 112

3. The rejections of claims 7 and 15-18, and 19-21 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention have been **withdrawn** in view of Applicant's Amendment.

Claim Objections

4. The objections of claims 1, 20 and 21 because of minor informalities have been **withdrawn** in view of Applicant's Amendment.

Claim Rejections - 35 USC § 102

5. The rejections of claims 1, 2, 9-12, and 18-21 under 35 U.S.C. 102(b) as being anticipated by Troedsson et al. (4,196,264) have been **withdrawn** in view of Applicant's Amendment.

Claim Rejections - 35 USC § 103

6. The rejections of claims 3, 5, and 15-16 under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. as applied to claim 1 above, and further in view of Snyder (4,699,854) have been **withdrawn** in view of Applicant's Amendment.

7. The rejections of claims 4, 6, and 17 under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. as applied to claim 1 above, and further in view of Snyder as applied to claim 3 above, and further in view of Rudenauer et al. (6,673,486) have been **withdrawn** in view of Applicant's Amendment.

8. The rejections of claims 7 and 8 under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. as applied to claims 1 and 2 above, and further in view of Rudenauer et al. have been **withdrawn** in view of Applicant's Amendment.

9. The rejections of claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. as applied to claim 1 above, and further in view of Babai et al. (4,499,160) have been **withdrawn** in view of Applicant's Amendment.

Response to Arguments

10. Applicant's arguments filed 8 June 2006 have been fully considered but they are not persuasive.

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The Applicant argues the Examiner attempts to combine Troedsson et al. and Snyder without any teaching or suggestion in either reference for making the combination

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the activating system of Troedsson et al. by incorporating the weights of Snyder because both are concerned with activating a battery during acceleration by breaking an ampoule containing electrolyte, and Snyder teaches an activating system comprising weights that would have provided a means to activate the battery with or without spin or setback thereby providing a less expensive and simpler battery.

The Applicant also argues that the Examiner has not shown wherein the “means to release the ampoule at the predetermined acceleration is disclosed in the reference as required by Section 112, paragraph 6, because these means are not disclosed in Snyder.

Claim 1 as amended now recites an activating system comprising a weight glued on the top of the ampoule **and/or** a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration.

The recitation “and/or” has been construed as alternative language. Accordingly, the recitation “activating system comprising a weight glued on the top of the ampoule and/or a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration”, can be construed in one of three ways:

1. an activating system comprising a weight glued on the top of the ampoule,
2. an activating system comprising a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration
3. an activating system comprising a weight glued on the top of the ampoule and a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration.

The Examiner has construed the recitation as an activating system comprising a weight glued on the top of the ampoule. As such, the Examiner does not shown wherein the “means to release the ampoule at the predetermined acceleration is disclosed in the reference as required by Section 112, paragraph 6.

However, with respect to claim 6, the instant specification is not directed toward any specific “means” to release the ampoule at the predetermined acceleration. Accordingly, the Examiner has broadly interpreted “means” as any device to release the ampoule at the predetermined acceleration.

(New) DETAILED ACTION

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 2, 5, 9-12, 15-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. in view of Snyder (4,699,854).

Claim 1: Troedsson et al. in Figures 1 and 2 disclose a reserve battery comprising:

a cell stack of electrodes (14, 15);

a liquid reserve ampoule including the electrolyte (10);

an activating system (12);

a housing (13) in which the cell-stack, ampoule and activating system are placed; and wherein the cell-stack of electrodes has an annular shape, and wherein the ampoule is placed at the centre of the annular cell-stack, and wherein the activating system breaks (via 20) the ampoule at a predetermined acceleration (col. 2: 35-col. 3:25).

Troedsson et al. do not disclose an activating system comprising a weight glued on the top of the ampoule and/or a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration.

Snyder in the lone Figure discloses an activating system comprising a weight (18) placed on the top of the ampoule (10) (col. 1: 63-col. 2: 51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the activating system of Troedsson et al. by incorporating the weights of Snyder because both are concerned with activating a battery during acceleration by breaking an ampoule containing electrolyte, and Snyder teaches an activating system comprising weights that would have provided a means to activate the battery with or without spin or setback thereby providing a less expensive and simpler battery (col. 2: 45-51).

Snyder does not disclose that the weight is glued to the ampoule. However, it would have been an obvious matter of choice to one with ordinary skill in the art at the time the invention was made to have modified the ampoule by glueing the weight thereto, since the Applicant has not disclosed that this particular contact provides any criticality and /or unexpected results and it appears that the invention would perform equally well with any contact such as the placement of the weight on the ampoule as taught by Snyder.

In line 9, the recitation “and/or” has been construed as alternative language. Accordingly, the recitation “activating system comprising a weight glued on the top of the ampoule and/or a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration”, can be construed in one of three ways:

1. an activating system comprising a weight glued on the top of the ampoule,
2. an activating system comprising a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration
3. an activating system comprising a weight glued on the top of the ampoule and a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration.

The Examiner has construed the recitation as an activating system comprising a weight glued on the top of the ampoule.

Claim 2: Troedsson et al. disclose that the activating system comprises a means (12) to protect the ampoule from vibrations and shocks (col. 2: 20-21).

Claim 5: The rejection of claim 5 is as set forth above in claim 1.

Claims 9 and 11: Troedsson et al. in Figure 1 disclose an activating system comprising a support (17) over which the ampoule (10) is stood up, edges linked only to the support by breaking means (col. 2: 68-col. 3: 5).

Claims 10 and 12: Troedsson et al. disclose a vibration and shocks protection means made of a flexible material. In particular, Troedsson et al. on col. 2: 10-21 disclose "...the large bearing surface between the plane ampule bottom surface and the plane support plate will result in and [sic] being supported in a very shock-proof manner..." which has been construed as anticipating a flexible material.

Claims 15 and 16: Troedsson et al. disclose that the predetermined acceleration is greater than or equal to the acceleration of a projectile fuze during transport or loading (abstract, col. 1: 15-25, and col. 3: 10-25).

Claim 18: Troedsson et al. disclose that the predetermined acceleration is greater than or equal to the acceleration of a projectile fuze during transport or loading (abstract, col. 1: 15-25, and col. 3: 10-25).

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13. Claims 4, 6-8, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. in view of Snyder as applied to claims 1, 2 and 5 above, and further in view of Rudenauer et al. (6,673,486).

Troedsson et al. and Snyder are as applied, argued, and disclosed above, and incorporated herein.

Claims 4 and 6: The Troedsson et al. combination does not disclose an activating system comprising a hanging device to which the ampoule is hung with means to release the ampoule at the a predetermined acceleration, wherein the hanging device comprises a vibration and shocks protection means.

Rudenauer et al. in Figure 1 disclose an activating system (26) comprising a hanging device (28) to which the ampoule (24) is hung with means (30) to release the ampoule at the a predetermined acceleration, wherein the hanging device comprises a vibration and shocks protection means (30) (col. 3: 15-col. 5: 21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the activating system of the Troedsson et al. combination by incorporating the hanging device of Rudenauer et al. because both are concerned with activating a battery during acceleration by breaking an ampule containing electrolyte, and Rudenauer et al. teach an activating system that would have provided an activatable battery with reliable free-fall safety thereby improving the overall performance of the battery.

Claim 17: Troedsson et al. disclose that the predetermined acceleration is greater than or equal to the acceleration of a projectile fuze during transport or loading (abstract, col. 1: 15-25, and col. 3: 10-25).

Claim 7: The Troedsson et al. combination does not disclose a plate with a predetermined form, some edges of this form retaining the hanging device in the top of battery housing.

Rudenauer et al. disclose a hanging device (30) in the form of a plate wherein some edges of this form (i.e. cylindrical sleeve 34) retain the hanging device in the top of battery housing (12) (col. 1: 14-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the activating system of the Troedsson et al. combination by incorporating the hanging device of Rudenauer et al. because both are concerned with activating a battery during acceleration by breaking an ampule containing electrolyte, and Rudenauer et al. teach an activating system that would have provided an activatable battery with reliable free-fall safety thereby improving the overall performance of the battery.

Claim 8: The rejection is as set forth above in claim 7 wherein further Rudenauer et al. disclose in Figure 1 the hanging device is enough big for pushing the edges against the housing (i.e. a cylindrical sleeve is fitted into a support sleeve which is supported on the battery cell 20) (col. 1: 14-40) and small enough small for releasing the hanging device from the housing at the said predetermined acceleration (col. 4: 12-56).

14. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. in view of Snyder as applied to claim 1 above, and further in view of Babai et al. (4,499,160).

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Troedsson et al. and Snyder are as applied, argued, and disclosed above, and incorporated herein.

Claim 13: The Troedsson et al. combination does not disclose an electrolyte liquid contained by the ampoule comprising thionylchloride and bromine.

Babai et al. disclose in Figure 1 an electrolyte liquid (14) contained by the ampoule (11) comprising thionylchloride and bromine (col. 4: 12-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the electrolyte of the Troedsson et al. combination by substituting the electrolyte with the electrolyte of Babai et al. because Babai et al. teach an electrolyte that would contribute to a battery having a fast activation and a high current drain thereby improving the overall performance and efficiency of the battery.

Claim 14: The rejection is as set forth above in claim 13 wherein Babai et al. disclose a reserve battery comprises an annular grid (col. 3: 9-12) on a plate over which a mixed powder comprising carbon and tetrafluoroethylene is put (col. 2: 36-45), a glass fiber foil layer (col. 4: 1-6) and a layer comprising lithium (i.e. lithium anode) (col. 3: 47). See also col. 2: 22-45, col. 3: 9-col. 4: 11).

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

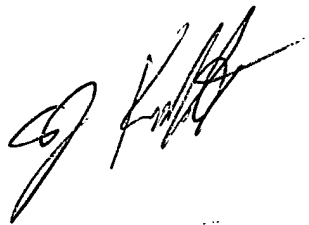
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H. Parsons whose telephone number is (571) 272-1290. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thomas H Parsons
Examiner
Art Unit 1745



STEPHEN KOLAFUT
PRIMARY EXAMINER
GROUP 1700